

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A stylet ~~having a proximal end and a distal end~~ for use with a medical stimulating lead, the stylet comprising:

an elongated body having a proximal end, a distal end, a length, and an outer diameter along the length; and

a handle disposed at the proximal end of the body;

wherein the body comprises an outer covering that is a tube spanning from the handle to the distal end, extending along the entire length of the body, the outer covering made of a metal outer covering material and being constructed to have a solid annular lateral cross-section; [[and]]

wherein the body also comprises a solid inner core surrounded by the outer covering from the handle to the distal end, made of inner core material, the inner core inside the outer covering and extending along the length of the body, the inner core having a solid lateral cross-section[[,]] ;

wherein the outer diameter of the body is isodiametric;

wherein the outer covering material and inner core material have different elastic and buckling properties.

2. (Original) The stylet of claim 1, wherein the outer covering material is a super-elastic material, which outer covering material is substantially more resistant to permanent bending deformation than the inner core material; and wherein the inner core material is a linear elastic material, which inner core material is substantially more resistant to buckling than the outer covering material.

3. (Currently amended) The style of claim 2, wherein the inner core material is selected from the group consisting of cold drawn 304 stainless steel, 316 stainless steel, and 316L stainless steel; and wherein the outer material is nitinol (425 nickel-titanium alloy).

4. (Previously Presented) The stylet of claim 3, wherein the inner core is a pre-formed rod.

5. (Cancelled)

6. (Currently amended) The stylet of claim [[5]] 1, wherein the inner core has a variable diameter along the length of the body, and wherein the outer covering also has a diameter that varies along the length of the body such that the outer diameter of the body remains isodiametric.

7. - 9. (Cancelled)

10. (Currently amended) The stylet of claim [[8]] 1, wherein the inner core ~~has a~~ and the outer covering each have substantially constant ~~thickness~~ thicknesses along the length of the ~~stylet~~ body.

11. (Original) The stylet of claim 1, wherein the inner core material is a super-elastic material, which inner core material is substantially more resistant to permanent bending deformation than the outer covering material; and wherein the outer covering material is a linear-elastic material, which outer covering material is substantially more resistant to buckling than the inner core material.

12. (Currently amended) The stylet of claim 11, wherein the outer covering material is selected from the group consisting of cold drawn 304 stainless steel, 316 stainless steel, and 316L stainless steel[[,]] ; and wherein the inner core material is nitinol (425 nickel-titanium alloy).

13. (Previously Presented) The stylet of claim 1, wherein the outer covering defines a tube and the inner core is a pre-formed rod that has been pre-stressed so that the inner core operates on the compression side of the stress-strain curve.

14. (Withdrawn) A stylet for use with a medical stimulating lead, the stylet comprising:

an outer covering extending from a proximal end of the stylet to a distal tip of the stylet; and
a solid inner core, made of inner core material, inside the outer covering, the inner core having a solid lateral cross-section and disposed entirely within the outer covering,
wherein the outer covering is made of an outer metal covering material which is substantially more flexible than the inner core material;
wherein the inner core material is substantially more resistant to buckling than the outer covering material.

15. (Withdrawn) The stylet of claim 14, wherein the outer covering material is selected from the group consisting of cold drawn 304 stainless steel, 316 stainless steel, 316L stainless steel and nitinol (425 nickel-titanium alloy); and wherein the inner core material is selected from the group consisting of magnesia partially stabilized Zirconia, Yttria stabilized Zirconia, ceramic, epoxy, and hard polyurethane.

16. (Withdrawn) The stylet of claim 15, wherein the stylet is dimensioned for use in deep brain stimulation (DBS).

17. (Withdrawn) The stylet of claim 14, wherein the outer covering defines a tube, having a wall cross-section defining an annulus.

18. (Withdrawn-Currently amended) A stimulating lead system which is insertable into tissue more than once, said system comprising:
a stimulating lead, said lead having an inner lumen along its axial length; and
the stylet of claim 1, [[a]] wherein the body of the stylet is configured and dimensioned to fit inside said lumen;
~~wherein said stylet comprises:~~
~~a rounded distal tip;~~
~~an outer covering extending from a proximal end of the stylet to the distal tip of the stylet; and~~

~~a solid inner core material inside said outer covering, the inner core material forming an inner core having a solid lateral cross section and extending from the proximal end of the stylet to the distal tip of the stylet,~~

~~wherein the outer covering is made of an outer metal covering material which is substantially more flexible than the inner core material;~~

~~wherein the inner core material is substantially more resistant to buckling than the outer covering material.~~

19. (Withdrawn-Currently amended) The lead system of claim 18,

wherein the outer covering material is selected from the group consisting of cold drawn 304 stainless steel, 316 stainless steel, and 316L stainless steel and nitinol (425 nickel-titanium alloy); and

wherein the inner core material is selected from the group consisting of magnesia partially stabilized Zirconia, Ytria stabilized Zirconia, ceramics, epoxy, and hard polyurethane.

20-21. (Cancelled).

22. (Currently amended) The stylet of claim 6, ~~wherein the stylet comprises a distal end and a proximal end, and~~ wherein the diameter of the inner core increases along the length of the stylet from the handle to the distal end of the stylet body from one of the proximal end or the distal end to the other of the proximal end or distal end.

23. (Currently amended) The stylet of claim 1, wherein the stylet has a solid lateral cross-section ~~from the handle to the distal end of the stylet~~ along the length of the body.

24. (New) The stylet of claim 1, wherein the handle has an outer diameter that is larger than the outer diameter of the body.

25. (New) The stylet of claim 1, further comprising a rounded tip coupled to the distal end of the body.

26. (New) The stylet of claim 25, wherein the rounded tip is coupled directly to the distal end of the body.

27. (New) The stylet of claim 1, wherein the inner core extends along the entire length of the body.